Attachment 3

Revised Ambient Impact Assessment

Ambient Impact Assessment

1.0 Ambient Impact Assessment

Air dispersion modeling was performed to demonstrate compliance with NAAQS for criteria pollutants in support of the application to modify the existing Permit to Construct (PTC) (P-2007.0100) for the High Desert Milk facility. Modeling was performed in substantial conformance with the Modeling Protocol submitted to the IDEQ on June 5, 2007.

1.1 Model Description / Justification

Air dispersion modeling was performed using the Environmental Protection Agency (EPA) AERMOD model. Building downwash was accounted for in the model. Building and tank dimensions were entered into the Building Parameter Input Program (version 04274) to calculate appropriate building profiles to import into AERMOD. Model input/output files are included as electronic files on an enclosed compact disc.

1.2 Receptor Network

A receptor network was established so that ambient concentrations could be evaluated. The first step in this process was to determine the location of the ambient air boundary and the second step was to assign receptor locations within the ambient air zone.

1.2.1 Ambient Air Boundary

The ambient air boundary was established as the facility's fenceline. See Figure 2 – Site Plan, for location of the fenceline.

1.2.2 Receptors

Receptors were established to determine maximum ambient air concentrations. A receptor grid with approximately 100 meter spacing was established across the entire evaluated area. Within 300 meters of the ambient air boundary, receptors were established every 25 meters. No receptors were established within the facility's controlled property boundary (ambient air boundary).

1.3 Elevation Data

Topography data for the site was obtained from the USGS as a 7.5 minute digital elevation model (DEM). AERMAP was used to pre-process this data for use in AERMOD.

1.4 Meteorological Data

Preprocessed meteorological data (surface and upper air) from the Boise airport was provided by the IDEQ. This data was processed by IDEQ using AERMET; the output files provided by the IDEQ were used as inputs to the AERMOD model for this site. Because this input data may not be representative of actual surface characteristics or meteorological conditions at the proposed plant location, an adjustment factor of twenty percent (20%) was applied to model results prior to adding in background concentrations.

1.5 Land Use Classification

The facility is industrial while the surrounding land is a mix of open space/agricultural and industrial land uses. The Air dispersion modeling was performed using a "rural" classification.

1.6 Surface Characteristics

Surface characteristics of the meteorological monitoring station were evaluated and incorporated into the AERMET processing performed by the IDEQ. These surface characteristics may not be representative for the High Desert Milk site but a safety factor of 20 percent was applied to model results to accommodate for the difference in surface and meteorological characteristics (as discussed in Section 1.4).

2.0 Preliminary Analysis

The first step in completion of an ambient impact assessment is to perform a Preliminary Analysis (PA). A PA involves modeling the incremental increase of emissions associated with the proposed modification and comparing the model predicted maximum ambient air concentrations to the Significant Contribution (SC) levels listed in IDAPA 58.01.01.006.102. If modeling of the proposed modification results in an ambient air concentration greater than the SC then a Full Impact Analysis (FIA) is necessary.

The proposed modification at the site involves reducing the size of the boilers to be installed at the facility and increasing the size of the emergency generator. A PA is not required for the boilers (P104 and P105) since the proposed boiler modification will decrease emissions below the values evaluated for the existing PTC (this modification is exempt from PTC requirements). Pollutant emission rates from the proposed emergency generator will be greater than the existing permitted generator for PM_{10}, NO_x, and SO_x. A PA is required for the PM_{10} and NO_x emissions increase associated with the proposed emergency generator upgrade. A PA is not required for the SO_x emissions increase since modeling for the existing PTC did not require SO_x modeling and because the proposed generator replacement will not substantially increase SO_x emissions. The results of the PA are summarized in Table 1.

As shown in Table 1, modeling results for PM_{10} were below the applicable SC and the modeling results for NO_x exceeded the SC. Since modeling of the proposed generator modification predicted ambient air concentrations that exceeded the SC for NO_x, a FIA was performed.

Table 1
Results of PA for Emergency Generator

Pollutant and Averaging Period	Emission Rate (g/s) [1]	Model Results ($\mu g/m^3$) [2]	Multiplier	Adjusted Output ($\mu g/m^3$) [3]	Significant Contribution (IDAPA 58.01.01.006.102) ($\mu g/m^3$)
PM_{10} - 24 hour	0.0139	4.12	1.2	4.94	5
PM_{10} - Annual	0.000794	0.046	1.2	0.055	1
NO_x - Annual	0.038	2.27	1.2	2.72	1

Notes:

1.) Emission rates are the incremental increase associated with the proposed generator modification. The emission rates for annual averaging periods were reduced by a factor of 500 hr / 8760 hr to account for limited hours of operation.
2.) Modeling was performed with the emergency generator as the only source.
3.) Output from the modeling was adjusted using a 1.2 factor to account for the lack of onsite meteorological data.

3.0 Full Impact Analysis

A FIA includes modeling of site-wide emissions and incorporates background concentrations to determine compliance with NAAQS. Only site-wide emissions of PM_{10} and NO_x were remodeled since a PA was not required for any other pollutants.

3.1 Emission and Source Data

Eight point sources were modeled. The eight point sources included discharges from five baghouses, two boilers, and an emergency generator. The criteria pollutants PM_{10} and NO_x were modeled from these sources. Table 2 summarizes the emission source characteristics used in the ambient impact analysis. All modeling was performed using the maximum potential to emit.

To be consistent with the original PTC application submitted for this site, PM_{10} emissions from the dryer were split equally between the two baghouse discharge stacks. NO_x emissions from the dryer were not split between the two stacks, instead the maximum NO_x emission rate from the dryer was applied to be both discharge stacks. The annual average emission rates for pollutants from the emergency generator were reduced to account for limited hours of operation of 500 hours per year.

Table 2
Emission Source Characteristics

Emission Source	Stack ID	Stack Height (ft)	Stack Diam. (ft)	Exhaust Temp. (°F)	Stack Gas Vel. (m/s)	Emission Rates (g/s)	
						PM_{10}	NO_x
Dryer Baghouse #1	P101A	114	4.08	190	17.08	0.665[2]	0.185
Dryer Baghouse #2	P101B	114	4.08	190	17.08	0.665[2]	0.185
Fluid-Bed Baghouse	P102	114	1.75	130	16.78	0.136	--
Powder Handling Baghouse #1	P103A	90	0.25 / 0.001m [1]	80	67.24 / 0.001 [1]	0.014	--
Powder Handling Baghouse #2	P103B	90	0.25 / 0.001m [1]	80	67.24 / 0.001 [1]	0.014	--
Boiler#1	P104	38	4	350	4.26	0.0315	0.422
Boiler #2	P105	38	4	350	4.26	0.0315	0.422
Emergency Generator [4]	GEN	5.94	1	500	19.21	0.046[3] (24-hr) 0.0026[3] (Annual)	0.096

Notes:
(1) Stack gas velocity set to 0.001 m/s and diameter set to 0.001 m for modeling purposes due to the stacks horizontal discharge orientation and vent cover.
(2) Modeling for PM_{10} was performed with the dryer emissions equally split between the two baghouse stacks.
(3) Emergency Generator PM_{10} modeling was performed for 24-hr and annual averaging periods at the different emission rates indicated.
(4) Emergency Generator emission rates for pollutants with annual averaging periods were reduced by a factor of 500 hours / 8760 hours to account for limited hours of operation.

3.2 Background Concentrations

Table 3 summarizes the criteria pollutant background concentrations. Criteria pollutant background concentrations for small town/suburban areas were provided by Kevin Schilling of the IDEQ.

3.3 Evaluation of Compliance With Standards

As discussed in Section 1.4, a model output adjustment factor of 20% was applied to the modeling results to account for variations in surface characteristics between the meteorological monitoring station and the High Desert Milk site. To determine compliance with NAAQS, the applicable background concentrations were added to the adjusted maximum predicted ambient concentrations determined from air dispersion modeling to result in total ambient concentrations. These total ambient air concentrations were compared to the NAAQS. Table 3 summarizes the air dispersion modeling results and compares the total predicted ambient air concentration to the applicable NAAQS. Based on this evaluation, no NAAQS are predicted to be

exceeded by emissions from the sources, if operated and configured as proposed in this application.

Table 3
Results of Ambient Impact Assessment for Criteria Pollutants
(All Concentrations in Units of $\mu g/m^3$)

Pollutant	Averaging Period	Maximum Air Dispersion Model Output	Output Adjustment Factor	Adjusted Output	Compliance Demonstration		
					Background	Total	NAAQS
PM10	24 hr, 2nd high	56.70	1.2	68.0	76	144	150
	Annual	16.38	1.2	19.7	27	46.7	50
NOx	Annual	24.32	1.2	29.2	32	61.2	100

Attachment 4

PTC Application Forms

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
04/03/07

Please see instructions on page 2 before filling out the form.

DEQ USE ONLY
Date Received
Project Number
Payment / Fees Included? Yes ☐ No ☐
Check Number

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	High Desert Milk		
2. Facility Name	Milk Processing Plant	3. Facility ID No.	031-00034
4. Brief Project Description - One sentence or less	Construction of a new milk processing plant		

PERMIT APPLICATION TYPE

5. ☐ New Facility ☐ New Source at Existing Facility ☐ Unpermitted Existing Source
☒ Modify Existing Source: Permit No.: P-2007.0100 Date Issued: 11/7/07
☐ Required by Enforcement Action: Case No.:____

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms	DEQ Verify
☒	☐	Form GI – Facility Information	☐
☒	☐	Form EU0 – Emissions Units General	☐
☒	☐	Form EU1 - Industrial Engine Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU2 - Nonmetallic Mineral Processing Plants Please Specify number of forms attached: _____	☐
☐	☒	Form EU3 - Spray Paint Booth Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU4 - Cooling Tower Information Please Specify number of forms attached: _____	☐
☒	☐	Form EU5 – Boiler Information Please Specify number of forms attached: _____	☐
☐	☒	Form HMAP – Hot Mix Asphalt Plant Please Specify number of forms attached: _____	☐
☐	☒	Form CBP - Concrete Batch Plant Please Specify number of forms attached: _____	☐
☐	☒	Form BCE - Baghouses Control Equipment	☐
☐	☒	Form SCE - Scrubbers Control Equipment	☐
☒	☐	Forms EI-CP1 - EI-CP4 - Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	☐
☒	☐	PP – Plot Plan	☐
☒	☐	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	☐
☐	☒	Form FRA – Federal Regulation Applicability	☐

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION	
1. Company Name	High Desert Milk, Inc.
2. Facility Name (if different than #1)	High Desert Milk Plant
3. Facility I.D. No.	031-00034
4. Brief Project Description:	Construction of new milk processing facility
FACILITY INFORMATION	
5. Owned/operated by: (√ if applicable)	☐ Federal government ☐ County government ☐ State government ☐ City government
6. Primary Facility Permit Contact Person/Title	Karl Nelson / General Manager
7. Telephone Number and Email Address	208-312-4510/ k_bnelson@yahoo.com
8. Alternate Facility Contact Person/Title	Dan Ward / President of the Board
9. Telephone Number and Email Address	208-312-2836 / makinmilk@safelink.net
10. Address to which permit should be sent	1051 Hansen Ave
11. City/State/Zip	Burley, Idaho 83318
12. Equipment Location Address (if different than #9)	1033 Idaho Ave.
13. City/State/Zip	Burley, Idaho 83318
14. Is the Equipment Portable?	☐ Yes ☒ No
15. SIC Code(s) and NAISC Code	Primary SIC: 2023 Secondary SIC (if any): NAICS: 311514
16. Brief Business Description and Principal Product	The facility will receive raw milk and produce dry skim milk powder.
17. Identify any adjacent or contiguous facility that this company owns and/or operates	None
PERMIT APPLICATION TYPE	
18. Specify Reason for Application	☐ New Facility ☐ New Source at Existing Facility ☒ Modify Existing Source: Permit No.: P-2007.0100 Date Issued: 11/7/07 ☐ Unpermitted Existing Source: ☐ Required by Enforcement Action: Case No.:
CERTIFICATION	
IN ACCORDANCE WITH IDAPA 58.01.01.123 (RULES FOR THE CONTROL OF AIR POLLUTION IN IDAHO), I CERTIFY BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION IN THE DOCUMENT ARE TRUE, ACCURATE, AND COMPLETE.	
19. Responsible Official's Name/Title	Karl Nelson, General Manager
20. RESPONSIBLE OFFICIAL SIGNATURE	Karl E. Nelson Date: 3-24-08
21. ☒ Check here to indicate you would like to review a draft permit prior to final issuance.	

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: High Desert Milk	Facility Name: Milk Processing Plant	Facility ID No:
Brief Project Description:	Construction of new milk processing plant	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION	
1. Emissions Unit (EU) Name:	EMERGENCY GENERATOR
2. EU ID Number:	
3. EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	CUMMINS
5. Model:	900DQFAC
6. Maximum Capacity:	1490 HP
7. Date of Construction:	2007-2008
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT			
10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)	
18. Actual Operation	1 hour/week
19. Maximum Operation	500 HOURS/YEAR

REQUESTED LIMITS	
20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☒ Operation Hour Limit(s):	500 HOURS/YEAR
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	Source is exempt

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 2
02/14/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: High Desert Milk	Facility Name: Milk Processing Plant	Facility ID No: 031-00034
Brief Project Description:	Construction of new milk processing plant.	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION	
1. Emissions Unit (EU) Name:	BOILER #1
2. EU ID Number:	P104
3. EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:P-2007.0100 Date Issued: 11/07/07
4. Manufacturer:	SUPERIOR BOILER WORKS, INC.
5. Model:	SUPER SEMIINOLE 4000 (OR EQUIVALENT)
6. Maximum Capacity:	33,475,000 BTU/HR
7. Date of Construction:	2007-2008
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, Complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT			
10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?:	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐Yes ☐No (If yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)	
18. Actual Operation	8,760 HOURS/YEAR
19. Maximum Operation	8,760 HOURS/YEAR

REQUESTED LIMITS	
20. Are you requesting any permit limits?	☐ Yes ☒ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 2
02/14/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: High Desert Milk	Facility Name: Milk Processing Plant	Facility ID No: 031-00034
Brief Project Description:	Construction of new milk processing plant.	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION	
1. Emissions Unit (EU) Name:	BOILER #2
2. EU ID Number:	P105
3. EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:P-2007.0100 Date Issued: 11/07/07
4. Manufacturer:	SUPERIOR BOILER WORKS, INC.
5. Model:	SUPER SEMIINOLE 4000 (OR EQUIVALENT)
6. Maximum Capacity:	33,475,000 BTU/HR
7. Date of Construction:	2007-2008
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, Complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT						
10. Control Equipment Name and ID:						
11. Date of Installation:		12. Date of Modification (if any):				
13. Manufacturer and Model Number:						
14. ID(s) of Emission Unit Controlled:						
15. Is operating schedule different than emission units(s) involved?:	☐ Yes ☐ No					
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐Yes ☐No (If yes, attach and label manufacturer guarantee)					
	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						
17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)	
18. Actual Operation	8,760 HOURS/YEAR
19. Maximum Operation	8,760 HOURS/YEAR

REQUESTED LIMITS	
20. Are you requesting any permit limits?	☐ Yes ☒ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	

Emissions Units - Industrial Engine Information **Form EU1**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: High Desert Milk	Facility Name: Milk Processing Plant	Facility ID No: 031-00034
Brief Project Description:	Construction of a new milk processing plant	

EXEMPTION

Please refer to IDAPA 58.01.01.222.01.c and d for a list of internal combustion engines that are exempt from the Permit to Construct requirements.

ENGINE (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

1. Type of Unit: ☐ New Unit ☐ Unpermitted Existing Unit ☒ Modification to a Unit with Permit #: Date Issued:

2. Use of Engine: ☐ Normal Operation ☒ Emergency ☐ Back-up ☐ Other:

3. Engine ID Number:	4. Rated Power:	
GEN	☒ Brake Horsepower(bhp) ☐ Kilowatts(kW)	
5. Construction Date: 2008	6. Manufacturer: Cummins	7. Model: 900DQFAC
8. Date of Modification (if applicable):	9. Serial Number (if available):	10. Control Device (if any):

FUEL DESCRIPTION AND SPECIFICATIONS

11. Fuel Type	☒ Diesel Fuel (#) (gal/hr)	☐ Gasoline Fuel (gal/hr)	☐ Natural Gas (cf/hr)	☐ Other Fuels (unit:)
12. Full Load Consumption Rate	63.9			
13. Actual Consumption Rate				
14. Sulfur Content wt%	500ppm	N/A	N/A	

OPERATING LIMITS & SCHEDULE

15. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):
500 gallons/year

16. Operating Schedule (hours/day, months/year, etc.):
Emergency conditions and maintenance.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 2
02/13/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: High Desert Milk	Facility Name: Milk Processing Plant	Facility ID No: 0.1-00034
Brief Project Description:	Construction of a new milk processing plant	

EXEMPTION

Please see IDAPA 58.01.01.222 for a list of industrial boilers that are exempt from Permit to Construct requirements.

Boiler (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

1. Type of Request ☐ New Unit ☐ Unpermitted Existing Unit ☒ Modification to a unit with Permit #:P-2007.0100

2. Use of Boiler: ☒ % Used For Process ☐ % Used For Space Heat ☐ % Used For Generating Electricity ☐ Other:

3. Boiler ID Number: P104	4. Rated Capacity: ☒ 33.48 Million British Thermal Units Per Hour (MMBtu/hr) ☐ 1,000 Pounds Steam Per Hour (1,000 lb steam/hr)	
5. Construction Date: 2007-2008	6. Manufacturer: Superior	7. Model: Super Seminole 4000
8. Date of Modification (if applicable):	9. Serial Number (if available):	10. Control Device (if any): **Note: Attach applicable control equipment form(s)**

FUEL DESCRIPTION AND SPECIFICATIONS

11. Fuel Type	☐ Diesel Fuel (#) (gal/hr)	☒ Natural Gas (cf/hr)	☐ Coal (unit: /hr)	☐ Other Fuels (unit: /hr)
12. Full Load Consumption Rate		33,475 scf/hr		
13. Actual Consumption Rate		33,475 scf/hr		
14. Fuel Heat Content (Btu/unit, LHV)		1,000 Btu/scf		
15. Sulfur Content wt%				
16. Ash Content wt%		N/A		

STEAM DESCRIPTION AND SPECIFICATIONS

17. Steam Heat Content	NA	NA		
18. Steam Temperature (°F)	N/A	N/A		
19. Steam Pressure (psi)	N/A	N/A		
20. Steam Type	N/A	N/A	☐ Saturated ☐ Superheated	☐ Saturated ☐ Superheated

OPERATING LIMITS & SCHEDULE

21. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):

22. Operating Schedule (hours/day, months/year, etc.): 24 hr/day, 365 days/yr

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 2
02/13/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: High Desert Milk	Facility Name: Milk Processing Plant	Facility ID No: 031-00034
Brief Project Description:	Construction of a new milk processing plant	

EXEMPTION

Please see IDAPA 58.01.01.222 for a list of industrial boilers that are exempt from Permit to Construct requirements.

Boiler (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

1. Type of Request ☐ New Unit ☐ Unpermitted Existing Unit ☒ Modification to a unit with Permit #:P-2007.0100		
2. Use of Boiler: ☒ % Used For Process ☐ % Used For Space Heat ☐ % Used For Generating Electricity ☐ Other:		
3. Boiler ID Number: P105	4. Rated Capacity: ☒ 33.48 Million British Thermal Units Per Hour (MMBtu/hr) ☐ 1,000 Pounds Steam Per Hour (1,000 lb steam/hr)	
5. Construction Date: 2007-2008	6. Manufacturer: Superior	7. Model: Super Seminole 4000
8. Date of Modification (if applicable):	9. Serial Number (if available):	10. Control Device (if any): **Note: Attach applicable control equipment form(s)**

FUEL DESCRIPTION AND SPECIFICATIONS

11. Fuel Type	☐ Diesel Fuel (#) (gal/hr)	☒ Natural Gas (cf/hr)	☐ Coal (unit: /hr)	☐ Other Fuels (unit: /hr)
12. Full Load Consumption Rate		33,475 scf/hr		
13. Actual Consumption Rate		33,475 scf/hr		
14. Fuel Heat Content (Btu/unit, LHV)		1,000 Btu/scf		
15. Sulfur Content wt%				
16. Ash Content wt%		N/A		

STEAM DESCRIPTION AND SPECIFICATIONS

17. Steam Heat Content	NA	NA		
18. Steam Temperature (°F)	N/A	N/A		
19. Steam Pressure (psi)	N/A	N/A		
20. Steam Type	N/A	N/A	☐ Saturated ☐ Superheated	☐ Saturated ☐ Superheated

OPERATING LIMITS & SCHEDULE

21. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):
22. Operating Schedule (hours/day, months/year, etc.): 24 hr/day, 365 days/yr

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 2/14/2007

Company Name:	High Desert Milk
Facility Name:	Milk Processing Plant
Facility ID No.:	031-00034
Brief Project Description:	Construction of a new milk processing plant.

Please see instructions on next page before filling out the form.

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - POINT SOURCES

		3.											
1.	2.	PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Source(s)													
Skim Milk Dryer (P101)	P101A	5.28	23.11	0.01	0.04	0.73	3.21	5.96	26.10	0.09	0.38	0.00	0.00
Skim Milk Dryer (P101)	P101B	5.28	23.11	0.01	0.04	0.73	3.21	5.96	26.10	0.09	0.38	0.00	0.00
Fluid-Bed Baghouse (P102)	P102	1.08	4.73										
Powder Handling Baghouse(P103)	P103A	0.06	0.25										
Powder Handling Baghouse(P103)	P103B	0.06	0.25										
Boiler #1 (P104)	P104	0.25	1.10	0.02	0.09	3.35	14.67	2.81	12.31	0.18	0.79	0.00	0.00
Boiler #1 (P105)	P105	0.25	1.10	0.02	0.09	3.35	14.67	2.81	12.31	0.18	0.79	0.00	0.00
Emergency Generator (GEN)	GEN	0.36	0.09	0.33	0.08	13.30	3.33	1.90	0.48				
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													
name of the emissions unit18													
name of the emissions unit19													
name of the emissions unit20													
name of the emissions unit21													
(insert more rows as needed)													
Total		12.61	53.73	0.39	0.34	21.46	39.08	19.44	77.30	0.53	2.33	0.00	0.00

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 1 1/11/2007
Company Name:	High Desert Milk	
Facility Name:	Milk Processing Plant	
Facility ID No.:	031-00034	
Brief Project Description:	Construction of a new milk processing plant.	

Please see instructions on next page before filling out the form.

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - FUGITIVE SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_x		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Fugitive Source(s)													
Name of Fugitive Source 1													
Name of Fugitive Source 2													
Name of Fugitive Source 3													
Name of Fugitive Source 4													
Name of Fugitive Source 5													
Name of Fugitive Source 6													
Name of Fugitive Source 7													
Name of Fugitive Source 8													
Name of Fugitive Source 9													
Name of Fugitive Source 10													
Name of Fugitive Source 11													
Name of Fugitive Source 12													
Name of Fugitive Source 13													
Name of Fugitive Source 14													
Name of Fugitive Source 15													
Name of Fugitive Source 16													
Name of Fugitive Source 17													
Name of Fugitive Source 18													
Name of Fugitive Source 19													
Name of Fugitive Source 20													
Name of Fugitive Source 21													
... (insert more rows as needed)													
Total													

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the Air Permit
Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 2
2/14/2007

Please see instructions on next page before filling out the form.

Company Name:	High Desert Milk
Facility Name:	Milk Processing Plant
Facility ID No.:	031-00034
Brief Project Description:	Construction of a new milk processing plant.

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - POINT SOURCES

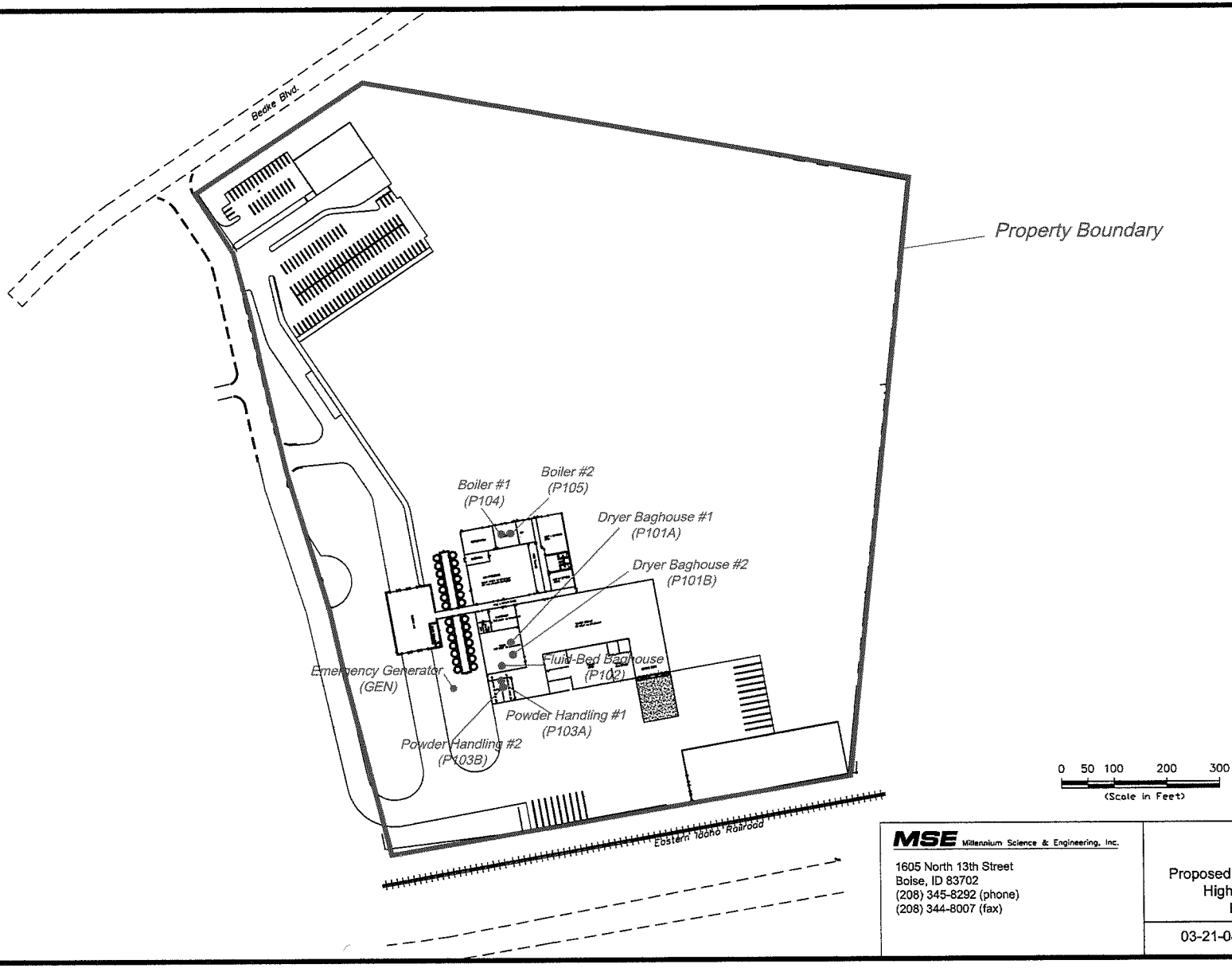
1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Source(s)													
Skim Milk Dryer (P101)	P101A												
Skim Milk Dryer (P101)	P101B												
Fluid-Bed Baghouse (P102)	P102												
Powder Handling Baghouse(P103)	P103A												
Powder Handling Baghouse(P103)	P103B												
Boiler #1 (P104)	P104	(0.21)	(0.90)	(0.02)	(0.07)	(2.81)	(12.30)	(2.36)	(10.32)	(0.15)	(0.70)		(0.00)
Boiler #1 (P105)	P105	(0.21)	(0.90)	(0.02)	(0.07)	(2.81)	(12.30)	(2.36)	(10.32)	(0.15)	(0.70)		(0.00)
Emergency Generator (GEN)	GEN	0.11	0.03	0.02	0.01	5.31	1.33	(2.42)	(0.61)				
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													
name of the emissions unit18													
name of the emissions unit19													
name of the emissions unit20													
name of the emissions unit21													
(insert more rows as needed)													
Total		(0.31)	(1.77)	(0.01)	(0.13)	(0.31)	(23.27)	(7.13)	(21.25)	(0.31)	(1.40)		(0.00)

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 2/14/2007
Company Name:	High Desert Milk	
Facility Name:	Milk Processing Plant	
Facility ID No.:	031-00034	
Brief Project Description:	Construction of a new milk processing plant.	

Please see instructions on next page before filling out the form.

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - FUGITIVE SOURCES

		3. Air Pollutant Maximum Change in Emissions Rate (lbs/hr or t/yr)											
1.	2.	PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Fugitive Source(s)													
Name of Fugitive Source 1													
Name of Fugitive Source 2													
Name of Fugitive Source 3													
Name of Fugitive Source 4													
Name of Fugitive Source 5													
Name of Fugitive Source 6													
Name of Fugitive Source 7													
Name of Fugitive Source 8													
Name of Fugitive Source 9													
Name of Fugitive Source 10													
Name of Fugitive Source 11													
Name of Fugitive Source 12													
Name of Fugitive Source 13													
Name of Fugitive Source 14													
Name of Fugitive Source 15													
Name of Fugitive Source 16													
Name of Fugitive Source 17													
Name of Fugitive Source 18													
Name of Fugitive Source 19													
Name of Fugitive Source 20													
Name of Fugitive Source 21													
(insert more rows as needed)													
Total													



MSE Millennium Science & Engineering, Inc.
1605 North 13th Street
Boise, ID 83702
(208) 345-8292 (phone)
(208) 344-8007 (fax)

Site Plan

Proposed Milk Processing Plant
High Desert Milk, Inc.
Burley, Idaho

03-21-08 | Figure 2

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 2/14/2007

Company Name:	High Desert Milk
Facility Name:	Milk Processing Plant
Facility ID No.:	031-00034
Brief Project Description:	Construction of a new milk processing plant.

Please see instructions on next page before filling out the form.

SUMMARY OF AIR IMPACT ANALYSIS RESULTS - CRITERIA POLLUTANTS

		1.		2.	3.	4.		5.
Criteria Pollutants	**Averaging Period**	**Significant Impact Analysis Results (µg/m3)**	**Significant Contribution Level (µg/m3)**	**Full Impact Analysis Results (µg/m3)**	**Background Concentration (µg/m3)**	**Total Ambient Impact (µg/m3)**	**NAAQS (µg/m3)**	**Percent of NAAQS**
PM_{10}	24-hour	4.90	5	68.04	76.00	144.04	150	96%
	Annual	0.06	1	19.66	27.00	46.66	50	93%
SO_2	3-hr	NA	25					
	24-hr	NA	5					
	Annual	NA	1					
NO_2	Annual	2.72	1	29.18	32.00	61.18	100	61%
CO	1-hr	NA	2000			0.00	40,000	
	8-hr	NA	500			0.00	10,000	

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 2/14/2007
Company Name:	High Desert Milk	
Facility Name:	Milk Processing Plnat	
Facility ID No.:	031-00034	
Brief Project Description:	Construction of a new milk processing plant.	

Please see instructions on next page before filling out the form.

POINT SOURCE STACK PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	.7	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Stack Height (m)**	**Modeled Diameter (m)**	**Stack Exit Temperature (K)**	**Stack Exit Flowrate (acfm)**	**Stack Exit Velocity (m/s)**	**Stack orientation (e.g., horizontal, rain cap)**
Point Source(s)										
Skim Milk Dryer (P101)	P101A	#########	#########	1,268.42	34.75	1.24	360.93	728.54	17.08	Vertical
Skim Milk Dryer (P101)	P101B	#########	#########	1,268.26	34.75	1.24	360.93	728.54	17.08	Vertical
Fluid-Bed Baghouse (P102)	P102	#########	#########	1,268.45	34.75	0.53	327.59	130.66	16.78	Vertical
Powder Handling Baghouse (P103)	P103A	#########	#########	1,268.56	27.43	0.00	299.82	0.00	0.00	Horizontal
Powder Handling Baghouse (P103)	P103B	#########	#########	1,268.26	27.43	0.00	299.82	0.00	0.00	Horizontal
Boiler #1 (P104)	P104	#########	#########	1,268.42	11.58	1.22	449.82	329.84	4.26	Vertical
Boiler #2 (P105)	P105	#########	#########	1,266.70	11.58	1.22	449.82	329.84	4.26	Vertical
Emergency Generator	GEN	#########	#########	1,269.00	1.81	0.30	533.15	2,971.00	19.21	Vertical
name of the emissions unit9										
name of the emissions unit10										
name of the emissions unit11										
name of the emissions unit12										
name of the emissions unit13										
name of the emissions unit14										
name of the emissions unit15										
name of the emissions unit16										
name of the emissions unit17										
name of the emissions unit18										
name of the emissions unit19										
name of the emissions unit20										
name of the emissions unit21										
(insert more rows as needed)										

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 2/14/2007

Company Name:	High Desert Milk
Facility Name:	Milk Processing Plant
Facility ID No.:	031-00034
Brief Project Description:	Construction of a new milk processing plant.

Please see instructions on next page before filling out the form.

FUGITIVE SOURCE PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	7.	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Release Height (m)**	**Easterly Length (m)**	**Northerly Length (m)**	**Angle from North (°)**	**Initial Vertical Dimension (m)**	**Initial Horizontal Dimension (m)**
Area Source(s)										
name of the emissions unit1	NA									
name of the emissions unit2										
name of the emissions unit3										
name of the emissions unit4										
name of the emissions unit5										
name of the emissions unit6										
name of the emissions unit7										
name of the emissions unit8										
name of the emissions unit9										
name of the emissions unit10										
Volume Source(s)										
name of the emissions unit11										
name of the emissions unit12										
name of the emissions unit13										
name of the emissions unit14										
name of the emissions unit15										
name of the emissions unit16										
name of the emissions unit17										
name of the emissions unit18										
name of the emissions unit19										
(insert more rows as needed)										

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit **Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 2/14/2007
Company Name:	High Desert Milk	
Facility Name:	Milk Processing Plant	
Facility ID No.:	031-00034	
Brief Project Description:	Construction of a new milk processing plant.	

Please see instructions on next page before filling out the form.

BUILDING AND STRUCTURE INFORMATION

1.	2.	3.	4.	5.	6.	7.
Building ID Number	**Length (ft)**	**Width (ft)**	**Base Elevation (m)**	**Building Height (m)**	**Number of Tiers**	**Description/Comments**
BLD_1	119.32	85.56	1268.92	7.62	1	Rectangular building
BLD_2	108.01	14.01	1266.99	7.62	1	Rectangular building
BLD_4	108.01	14.01	1269.00	7.62	1	Rectangular building
BLD_6	Various	Various	1268.84	9.75/33.83	2	Polygonal two tier building
BLD_7		12.50	1268.00	24.31	1	Circular building
BLD_9		12.50	1268.50	24.31	1	Circular building
BLD_10		12.50	1268.94	24.31	1	Circular building
BLD_11		12.50	1269.00	24.31	1	Circular building
BLD_12		12.50	1269.00	24.31	1	Circular building
BLD_14		12.50	1269.00	13.34	1	Circular building
BLD_15		12.50	1269.00	13.34	1	Circular building
BLD_16		12.50	1269.00	16.99	1	Circular building
BLD_17		12.50	1269.00	16.99	1	Circular building
BLD_19		12.50	1269.00	16.99	1	Circular building
BLD_20		12.50	1269.00	24.31	1	Circular building
BLD_21		12.50	1269.00	24.31	1	Circular building
BLD_22		12.50	1269.00	24.31	1	Circular building
BLD_23		12.50	1269.00	24.31	1	Circular building
BLD_25		12.50	1269.00	24.31	1	Circular building